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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,502	03/17/2004	Dana Brad	5569/79071 (03-27)	3667
22342 7590 09/25/2009 FITCH EVEN TABIN & FLANNERY 120 SOUTH LASALLE STREET SUITE 1600 CHICAGO, IL 60603-3406				
EXAMINER				
WANG, CLAIRE X				
ART UNIT		PAPER NUMBER		
2624				
MAIL DATE		DELIVERY MODE		
09/25/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/802,502

**Applicant(s)**

BRAD ET AL.

**Examiner**

CLAIRE WANG

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicants' response to the last Office Action, filed on July 24<sup>th</sup>, 2009 has been entered and made of record.
2. Applicant's amendment has necessitated new grounds of rejection. Thus, new grounds of rejection are presented in this Office Action.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new grounds of rejection.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-12 and 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laird (US 2003/0118237) in view of Wuestefeld et al. (US 6,737,970 B2 hereinafter "Wuestefeld")

As to claim 1, Laird teaches a barrier operator for moving a barrier between open and closed positions with respect to a barrier opening (a system that detects objects entering a garage door; Paragraph [0010], lines 1-3), comprising a pattern present during at least all movement of the barrier ([0012], lines 3-5); an imaging device to observe a portion of the barrier opening as illuminated by the optical pattern (CCD camera views the pattern; [0011], lines 2-4); and a controller coupled to the imaging device to sense when the optical pattern in the observed portion of the barrier opening changes, and generating a detection signal in response thereto (when an object enters the field of vision of the camera, it interrupts the viewing of the recognized pattern and the processor decides whether or not the object is a intrusion; if it is an intrusion, then a signal is sent to the head unit of the garage door operator; [0011], lines 12-22), the

detection signal being indicative of the presence of the obstruction at least during all movement of the barrier ([0012], lines 3-5).

Wuestefeld teaches an opto-electronic apparatus for detection of intrusion of an object (Title), wherein an illumination unit projects a straight line onto the monitored area and the detected pattern of the line is compared to pre-set patterns stored in memory. When the detected pattern and the stored pattern is substantially the same, no object has been detected (Col. 3, lines 1-18). Thus, Wuestefeld reads on the claimed pattern used is generated using light projections, wherein the light projection being a single substantially straight line. Therefore, it would have been obvious for one ordinarily skilled in the art at the time the invention was made to combine the garage door obstacle detection system of Laird with the intrusion detection system of Wuestefeld in order to allow the system to deactivate if an object with pre-set characteristic features enters the monitored area (Wuestefeld Col. 2, lines 43-48).

As to claim 2, Laird teaches apparatus for periodically recording images detected by the imaging device ([0011], lines 8-9).

As to claim 3, Laird teaches wherein the controller periodically compares an observed pattern detected by the imaging device with a digital representation of a non-obstacle pattern previously detected and recorded ([0011], lines 17-19).

As to claim 4, Wuestefeld teaches wherein the non-obstacle pattern is a substantially straight line (Col. 3, line 4).

As to claim 5, Laird teaches wherein the digital imaging device observes the barrier path at an angle to the scanning device (the camera is aimed onto the sidewall with the pattern in such a way that the camera looks across the door opening to the pattern on the wall; [0011], lines 4-7).

As to claim 6, Laird teaches an alarm device to generate an alarm indication in response to the detection signal ([0011] lines 20-22).

As to claim 7, Wuestefeld teaches wherein the alarm indication is an audible signal (Col. 1, lines 24-25).

As to claim 8, Wuestefeld teaches wherein the alarm indication is a visual signal (shut down the machine is something that can read as a visual signal or some other action could also be read as a visual signal; Col. 1, lines 24-25).

As to claim 9, Laird teaches a barrier drive unit for moving the barrier and wherein the controller is responsive to the detection signal to control the barrier drive (barrier movement operator; [0005], line 6).

As to claim 11, Laird teaches wherein the imaging device is a CCD camera (1 Fig. 1).

As to claim 12, Wuestefeld teaches wherein the light pattern generator is disposed on the barrier (projecting a line onto the detection area and in this case the monitored area is the side wall of the garage door; Col. 3, lines 1-18).

As to claim 14, Laird teaches a system that detects objects entering a garage door (Paragraph [0010], lines 1-3) comprising a pattern across a defined area associated with a barrier and producing a pattern in the defined area at least during all movements of the barrier ([0012], lines 3-5); And when an object enters the field of vision of the camera, it interrupts the viewing of the recognized pattern and the processor decides whether or not the object is a intrusion; if it is an intrusion, then a signal is sent to the head unit of the garage door operator ([0011], lines 12-22), the detection signal being indicative of the presence of the obstruction at least during all movement of the barrier ([0012], lines 3-5).

Wuestefeld teaches a system for detecting an object (Title), light pattern generator projecting a light the light pattern being a single substantially straight line in the absence of an obstruction (Col. 3, lines 1-18); a digital imaging device for detecting the light pattern produced by the light pattern generator (camera; 15 Fig. 2); a controller having a memory with a stored image of a non-obstruction pattern detected in the

defined area as produced by the light pattern generator (Col. 3, lines 1-18); and the controller periodically compares said image stored in the memory with the observed single substantially straight line detected by the imaging device produced by the light beam shining across the defined area and recorded by the digital imaging device and determines when the observed single substantially straight line changes from a single substantially straight line so as to be effective to determine a presence of the obstruction in the defined area (Col. 3, lines 1-18). Thus, Wuestefeld reads on the claimed invention. Therefore, it would have been obvious for one ordinarily skilled in the art at the time the invention was made to combine the garage door obstacle detection system of Laird with the intrusion detection system of Wuestefeld in order to allow the system to deactivate if an object with pre-set characteristic features enters the monitored area (Wuestefeld Col. 2, lines 43-48).



As to claim 15, Wuestefeld teaches wherein when the controller detects a difference between the digital representation of the light pattern produced by detecting the defined area and the image stored in a memory (Col. 3, lines 1-18), the controller initiates an alarm (Col. 1, lines 23-24).

As to claim 16, Wuestefeld teaches wherein the image stored in the memory is of a substantially straight line produced by the pattern generator in absence of an object in the defined area (Col. 3, lines 1-18).

As to claim 17, Laird and Wuestefeld teaches wherein the digital imaging device is a CCD camera (Laird 1 Fig. 1), which is installed at an offset angle from the laser device (Wuestefeld Fig. 2).

As to claim 18, it is the method claim of claim 14. Claim 18 differs from claim 14 in that claim 18 further teaches the digital imaging device the optical pattern at an off-set angle to the projected beam (Wuestefeld Fig. 2).

As to claim 19, Wuestefeld teaches generating an alarm signal responsive to the control signal (Col. 1, lines 23-24).

As to claim 20, Laird teaches detecting objects by digital imaging device (1 Fig. 1) and also teaches a barrier movement operator (garage door operator [0011] lines 21-22). Thus, the barrier movement operator of Laird reads on the claimed controlling movement of a barrier.

As to claim 21, it differs from claim 1 in that it does not teach generating a detection signal in response to the detection of an obstacle that claim 1 teaches. Please see claim 1 for detail analysis.

As to claim 22, it differs from claim 21 in that claim 22 further teaches of the light pattern can be enabling or disabling (Laird teaches the pattern detected when correlated with the stored images, if a match is not found then the object is considered to be an intrusion and thus a signal is sent to the head unit of the garage door operator; this clearly shows that the image retrieved is able to enable or disable the system; [0011], lines 12-22).

As to claim 23, it differs from claim 18 in that claim 23 refers to the optical pattern discussed in claim 18 as optical illumination and claim 23 does not teach the digital imaging device the optical pattern at an off-set angle to the projected beam. Examiner's note: optical pattern and optical illumination refers to the same thing according to applicant's specification, thus claim 23 is analyzed in the same manner as claim 18. Please see above for details.

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As to claim 24, it is the same as claim 19. Please see claim 19 for detail analysis.

As to claim 25, it is the same as claim 20. Please see above for detail analysis.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laird in view of Wuestefeld.

As to claim 13, Laird teaches a barrier movement operator ([0005], line 6). Laird does not expressly disclose that the barrier movement operator contains a head unit with a motor for moving the barrier. However, Examiner takes Official Notice that a motor for moving barriers is well known in the art. It would have been obvious at the time of the invention was made to one of ordinary skill in the art to add a motor to the barrier movement operator since Examiner takes official notice that motors are commonly used to move barriers.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laird and Wuestefeld further in view of Cofer .

As to claim 10, Laird and Wuestefeld teach an object detection system wherein an electrical light pattern is generated in order to detect the object (Wuestefeld Col. 3, lines 1-18). Cofer teaches an apparatus for detection objects also using projected light patterns, wherein the light patterns are generated using a laser diode (Cofer Col. 3, line 59) and an optical lens to focus a beam generated by the laser diode (Cofer Col. 3, line 61). Thus, Cofer reads on the claimed laser diode and optical lens. Therefore, it would have been obvious for one ordinarily skilled in the art at the time the invention was made to combine the laser diode and optical lens of Cofer with light pattern of Laird and Wuestefeld since it is well known in the art that the combination of a laser and optical lens may produce light patterns.

***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAIRE WANG whose telephone number is (571)270-1051. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Claire X. Wang/  
09/18/2009

/Brian P. Werner/  
Supervisory Patent Examiner, Art Unit 2624